P2 Metal Finishing Technologies Pilot
Fifth Stakeholder Advisory Group Meeting

January 19, 2000
Omni Rosen Hotel, Orlando, FL

Background

This fifth meeting of the Stakeholder Advisory Group for the Environmental Technology Verification Program for Metal Finishing Pollution Prevention Technologies (ETV-MF) began at 8:30 a.m. on January 19, 2000, at the Omni Rosen Hotel in Orlando, FL. The meeting was conducted in conjunction with the AESF Week 2000 Conference.

Donn Brown of Concurrent Technologies Corporation (CTC), Program Manager of the ETV Pilot, welcomed everyone and thanked them for attending during the busy AESF Week Conference.

Mr. Brown summarized the objectives and agenda for the meeting. He explained that the objectives were to (1) review testing progress since the September 22, 1999, meeting, (2) present the results of the generic technology verification vendor meeting, and (3) obtain stakeholder input on future plans for the standard and generic technology verification approaches.

Stakeholder Meeting Presentations

Donn Brown reviewed the topics discussed at the September 22 stakeholder meeting and described the activities the ETV-MF Team had undertaken since then. He briefly described the testing status of the two aqueous cleaner bath maintenance technologies, disclosed the results of the generic technology verification vendor meeting, and stated that these topics would be presented in greater detail later in the meeting. He also described ways that verifications could be conducted to address concerns voiced by stakeholders at the September 22 stakeholder meeting. These concerns included collecting performance data prior to and after installation of the technology in order to verify the environmental benefit, and obtaining data from vendors on installed applications other than the one tested to give metal finishers an idea of other potential applications. Mr. Brown stated that at least one vendor identified a test location where the technology is planned to be installed. Performance data prior to installation will be collected there. In other cases, vendors have specified test sites where the technology has already been installed in which data prior to installation cannot be verified. In these cases, historical waste disposal records will be collected and included in the verification report to ascertain the environmental benefit. Mr. Brown stated generic technology verification tests can be designed specifically to verify performance on multiple applications or processes, but that standard technology verifications are designed to verify technology performance on processes as installed at the test site selected by the vendor. Performance on different processes would require another verification test. Mr. Brown also stated that,

as discussed at the September 22 meeting, material balance could serve a similar purpose as before-and-after data to report environmental benefit.

Gus Eskamani, CAMP, Inc., then briefly described the progress on verification testing of the BioClean, USA microbiological aqueous cleaner bath maintenance technology. The test plan has been reviewed by EPA, BioClean, and National Manufacturing (the test site), and the ETV-MF Team was currently addressing comments received. Mr. Eskamani explained the test is being planned for February 2000.

George Cushnie, CAI Resources, Inc., briefly presented the status of verification testing of the USFilter Silverback aqueous cleaner recycling technology. Mr. Cushnie explained that the test plan is ready for EPA review and that testing is scheduled for March 2000. He also stated that background information on process performance prior to technology installation is available and could be introduced into the report as unverified information.

Chris Start, Michigan Manufacturing Technology Center (MMTC), gave a detailed presentation of the progress on initiating the verification process with a USFilter RETEC electrodialysis technology for maintaining a chromic acid anodize bath. The technology and test site description, overall project goal, additional project objectives, and test design were presented to the stakeholders. Mr. Start stated that USFilter selected DV Industries in Los Angeles as the test site. The RETEC system was installed on a 10,000 gallon anodizing bath at DV Industries in 1995. The RETEC system continuously removes aluminum contaminants from the bath, converts chrome III to chrome VI, and returns the solution back to the tank for further processing. Mr. Start explained that data could be collected on the accumulation of contaminants with the RETEC system turned off in order to simulate conditions, that existed prior to installation. In this way, environmental benefit could be verified by comparing this data to the data collected with the technology turned on.

The stakeholders were very interested in the details of the various testing projects and asked many questions. One stakeholder asked if stakeholders could visit the test site to view the technology in operation and help ensure that aspects of the process important to metal finishers were not overlooked. This stimulated a discussion of the ramifications of stakeholders visiting the test site. One stakeholder stated access to plating processes is frequently limited to avoid disclosure of proprietary information. Another stakeholder said the list of stakeholders could be provided to the test site for approval prior to visiting, and those visiting could sign non-disclosure statements. One stakeholder stated too many people touring the test site could discourage participation and therefore, stakeholder visits should be arranged on a case-by-case basis and not made an integral part of the verification process. Another stakeholder suggested a single stakeholder representative could be appointed to visit in lieu of a large number of stakeholders visiting the test site. The stakeholders agreed that a detailed presentation such as that given by Chris Start is desirable when initiating testing on a new technology, while summaries like the presentations given by Gus Eskamani and George Cushnie are appropriate for technologies that have already been reviewed by the stakeholders.

Donn Brown presented a summary of the October 28, 1999, meeting with two vendors to discuss generic technology verification of electrodialysis for the rejuvenation of electroless nickel plating baths. The meeting was held in Hartford, CT, and was attended by representatives from two electrodialysis technology vendors (Zero Discharge Technologies, Inc., and PureCycle Environmental Technologies, Inc.), MacDermid, Inc., Peter Gallerani, Donn Brown, Nabil Zaki, and Ernie Walen. During the meeting, the group discussed issues involved with developing a generic technology verification, including building project teams, defining the focus of the test, test plan development, vendor cost share, and test objectives to demonstrate successful performance. At the end, due to competitive issues between the two vendors, Zero Discharge Technologies declined to participate further in the generic technology verification test.

The ETV-MF Team and the stakeholders discussed how to proceed further with the generic technology verification test. The ETV-MF Team proposed and the stakeholders agreed that the ETV-MF Team would hold a meeting or a conference call with MacDermid and electroless nickel chemistry suppliers in order to discuss their participation in a generic verification test.

Donn Brown then discussed future project plans with the stakeholders. Under the standard approach, the ETV-MF Team will complete verification testing of four technologies and initiate testing of four other technologies by September 2000. The ETV-MF Team will meet with electroless nickel chemistry suppliers, prepare a test plan for generic verification testing of electrodialysis for electroless nickel solutions, and initiate the verification test. Mr. Brown then discussed the need to begin to formulate plans to identify additional focus areas for which to solicit technologies for testing later in the pilot program. The stakeholders requested the ETV-MF Team consult sources of information such as the National Metal Finishing R&D Plan Update, and Strategic Goals Program survey data to develop straw-man focus areas for the stakeholders to review.

Next Steps

Mr. Brown outlined a series of proposed next steps. The ETV-MF Team will finalize the test plans and initiate verification testing of the BioClean and USFilter Silverback technologies. The ETV-MF Team will initiate test plan development and identify potential test sites for two additional technologies, Renovare International RenoCell and USFilter RETEC electrodialysis technologies, under the standard technology verification process. The ETV-MF Team will coordinate and hold a meeting with electroless nickel chemistry suppliers and MacDermid to discuss generic verification of electrodialysis technology. The ETV-MF Team will develop straw-man focus areas for the stakeholders to review.

Mr. Brown also suggested the stakeholders meet again in connection with the AESF SUR/FIN Conference in Chicago, IL, sometime during the week of June 27-29, 2000. An agenda will be developed to establish a short, focused, four-hour meeting.

LIST OF ATTENDEES

Name	Company
Woody Allen	Concurrent Technologies Corporation
Eric Brooman	Concurrent Technologies Corporation
Donn Brown	Concurrent Technologies Corporation
Richard Burton	ACME Industrial Group
George Cushnie	CAI Resources, Inc.
Alva Daniels	US EPA Pilot Manager
Gus Eskamani	CAMP, Inc.
Ken Hankinson	KCH Services, Inc.
Alex Kappos	Erieview Metal Treating
Fred Mueller	Wendt Dunnington Company
Tony Revier	Uyemura, International
Bill Saas	Taskem, Inc.
Howard Saunders	Nashville Wire Products/AESF
Dave Schario	Concurrent Technologies Corporation
Chris Start	Michigan Manufacturing Technology Center
Ernie Walen	Heatbath Corporation
Steve Williams	ICF Consulting
Douglas Wyatt	United Airlines
Nabil Zaki	MacDermid, Inc.